

Title (en)

METHODS AND DEVICES FOR BINARY ENTROPY CODING OF POINT CLOUDS

Title (de)

VERFAHREN UND VORRICHTUNGEN ZUR BINÄREN ENTROPIECODIERUNG VON PUNKTWOLKEN

Title (fr)

PROCÉDÉS ET DISPOSITIFS DE CODAGE ENTROPIQUE BINAIRE DE NUAGES DE POINTS

Publication

EP 3553745 A1 20191016 (EN)

Application

EP 18305415 A 20180409

Priority

EP 18305415 A 20180409

Abstract (en)

Methods and devices for encoding a point cloud. A bit sequence signaling an occupancy pattern for sub-volumes of a volume is coded using binary entropy coding. Contexts may be based on neighbour configuration and a partial sequence of previously-coded bits of the bit sequence. A determination is made as to whether to apply a context reduction operation and, if so, the operation reduces the number of available contexts. Example context reduction operations include reducing neighbour configurations based on shielding by sub-volumes associated with previously-coded bits, special handling for empty neighbour configurations, and statistics-based context consolidation.

IPC 8 full level

G06T 9/00 (2006.01); **G06T 9/40** (2006.01)

CPC (source: EP KR US)

G06T 3/40 (2013.01 - US); **G06T 9/001** (2013.01 - EP KR US); **G06T 9/005** (2013.01 - EP); **G06T 9/40** (2013.01 - EP KR US); **G06T 2207/10028** (2013.01 - KR)

Citation (applicant)

EP 18305037 A 20180118

Citation (search report)

- [YA] LASSERRE S ET AL: "[PCC] Neighbour-dependent entropy coding of occupancy patterns in TMC3", 121. MPEG MEETING; 22-1-2018 - 26-1-2018; GWANGJU; (MOTION PICTURE EXPERT GROUP OR ISO/IEC JTC1/SC29/WG11),, no. m42238, 21 January 2018 (2018-01-21), XP030070580
- [YA] MADHUKAR BUDAGAVI: "Occupancy map coding simplification in PCC TMC2", 121. MPEG MEETING; 22-1-2018 - 26-1-2018; GWANGJU; (MOTION PICTURE EXPERT GROUP OR ISO/IEC JTC1/SC29/WG11),, no. m42172, 17 January 2018 (2018-01-17), XP030070514
- [A] "PCC Core Experiments for Category 3", 121. MPEG MEETING; 22-1-2018 - 26-1-2018; GWANGJU; (MOTION PICTURE EXPERT GROUP OR ISO/IEC JTC1/SC29/WG11),, no. N17347, 3 April 2018 (2018-04-03), XP030023994
- [AP] "PCC Test Model Category 3 v1", 121. MPEG MEETING; 22-1-2018 - 26-1-2018; GWANGJU; (MOTION PICTURE EXPERT GROUP OR ISO/IEC JTC1/SC29/WG11),, no. N17349, 16 April 2018 (2018-04-16), XP030023996
- [T] LASSERRE S ET AL: "[PCC] A binary entropy coder for geometry coding in TM3", 122. MPEG MEETING; 16-4-2018 - 20-4-2018; SAN DIEGO; (MOTION PICTURE EXPERT GROUP OR ISO/IEC JTC1/SC29/WG11),, no. m42522, 11 April 2018 (2018-04-11), XP030070861

Cited by

US11361472B2; EP3896657A1; WO2021081783A1; WO2024120325A1; WO2024086276A1; WO2023081009A1; EP3595180B1; WO2021084293A1; WO2021084295A1; WO2021140354A1; WO2021084292A1; WO2020259979A1; EP4329313A1; EP3800892A1; EP3800886A1; WO2020259978A1; EP4307684A2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3553745 A1 20191016; EP 3553745 B1 20210901; CN 112272922 A 20210126; EP 3937132 A1 20220112; JP 2021521679 A 20210826; JP 7320531 B2 20230803; KR 102631110 B1 20240129; KR 20200141065 A 20201217; US 11620767 B2 20230404; US 11861869 B2 20240102; US 2021192797 A1 20210624; US 2023135914 A1 20230504; US 2024005565 A1 20240104; WO 2019195920 A1 20191017

DOCDB simple family (application)

EP 18305415 A 20180409; CA 2019050399 W 20190403; CN 201980039083 A 20190403; EP 21192137 A 20180409; JP 2020555094 A 20190403; KR 20207031930 A 20190403; US 201917045771 A 20190403; US 202218069466 A 20221221; US 202318466919 A 20230914